

What Is Claimed Is:

1. A production cell comprising a plurality of work performing elements for performing work, and an information processing device for commanding work tasks, connected to the respective work performing elements by communications means;

wherein said information processing device outputs a command consisting of a set of task units assigned with an execution sequence, to each of the work performing elements; and

the work performing elements each store operating programs for respectively executing one or more task units, and perform work by executing the operating programs in the order of the execution sequence, on the basis of the set of task units with an assigned execution sequence output by said information processing device.

2. The production cell according to claim 1, wherein the management of the task unit to be executed next is performed by the information processing device, each time the work in one task unit is completed.

3. The production cell according to claim 1, wherein the management of the task unit to be executed next is performed by communications between the work performing elements, each time the work in one task unit is completed.

4. The production cell according to claim 1, comprising two or more work performing elements capable of performing the work of the same task unit, wherein the work performing

element to carry out the work of said same task unit is determined by said information processing device.

5. The production cell according to claim 1, comprising two or more work performing elements capable of performing the work of the same task unit, wherein the work performing element to carry out the work of said same task unit is determined by communications between the work performing elements, in accordance with a previously determined priority order.

6. A production cell comprising a plurality of work performing elements for performing work, and an information processing device for commanding work tasks, connected to the respective work performing elements by communications means,

wherein said information processing device comprises:

means for storing task unit indicator information describing the execution sequence of task units required in order to accomplish the work in question, for each type of work command to be executed in said production cell;

means for receiving a work command and reading out the task unit indicator information corresponding to said received work command, from said storing means;

means for receiving notifications for executability from the respective work performing elements, and sending an execution command to one of the work performing elements having sent said received notifications for executability;

means for receiving task unit indicator information updated and sent back by a work performing element; and

means for sending said task unit indicator information read out from said storing means, and the updated task unit indicator information sent back from the work performing element, to each of the work performing elements;

and each of said work performing elements comprises:

task unit storing means for storing one or more task units;

means for receiving task unit indicator information from said information processing device and determining whether or not it is possible to execute the task unit that is to be executed next, on the basis of said task unit indicator information;

means for sending said notification for executability to said information processing device if said task unit is determined to be executable;

means for receiving an execution command from said information processing device and executing the instructed task unit; and

means for updating said task unit indicator information and sending same to said information processing device, when execution of said task unit has been completed, such that it can be determined that said task unit has been completed on the basis of said received task unit indicator information.

7. A production cell comprising a plurality of work performing elements for performing work, and an information processing device for commanding work tasks, connected to the respective work performing elements by communications means, wherein said information processing device comprises:

means for storing task unit indicator information describing the execution sequence of task units required in order to accomplish the work, for each type of work command to be executed in said production cell;

means for receiving a work command and reading out the task unit indicator information corresponding to said received work command, from said storing means;

means for successively outputting information relating to an execution unit to be executed, to each of the work performing elements, on the basis of the execution sequence in the task unit indicator information read out, directly after said task unit indicator information has been read out and each time an execution completion notification is received; and

means for receiving notifications for executability from the respective work performing elements, and sending an execution command to one of the work performing elements having sent said received notifications for executability;

and each of said work performing elements comprises:

task unit storing means for storing one or more task units;

means for receiving execution unit information from said information processing device and determining whether or not it is possible to execute the task unit of said execution unit information;

means for sending said notification for executability to said information processing device if said task unit is determined to be executable;

means for receiving an execution command from said information processing device and executing the instructed task unit; and

means for sending an execution completion notification to said information processing device when the execution of said task unit has been completed.

8. The production cell according to claim 6 or claim 7, wherein said means for determining whether a task unit is executable or not determines whether or not it is possible to execute the task unit on the basis of the task units that can be executed by the work performing element, and management data storing whether or not the work in said task unit can be started.

9. The production cell according to claim 1, wherein a new work command can be received and work tasks corresponding to said new work command can be executed, while executing work tasks corresponding to another work command already received.

10. The production cell according to claim 1, wherein the types of said work commands are determined by the types of workpiece that are to be processed.